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BUREAU
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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 7 1927

REPORT FOR WEEK ENDING MAY 7, 1927.

HAVRE:

The past week was characterized by continued cloudy weather. Field work was possible on only two days. Precipitation, however, has only totaled .79 inch. This was recorded on five days. Temperatures have been a little low for rapid growth although grains are coming up. Grass is making fairly rapid growth but should have a little warmer weather.

The past week has brought out a rather severe condition in many of the older fields of alfalfa. Apparently these plants started growth early in April. A temperature of 11° following this growth seems to have caused a decided injury to the crowns. Buds are now starting below the crowns and apparently most of the plants will survive. It seems though, that the first cutting will be very late and probably light. This condition seems to have occurred over a fairly large area. It may possibly be associated with heavy fall pasturing.

Maximum temperature 64, minimum 32; precipitation .79 inch.

JUDITH BASIN:

The weather during the past week has been cool and cloudy with more wind than usual for this date. This caused some soil blowing on the 2nd., particularly on fields that had been cultivated in preparation for seeding. No damage to winter crops has been reported, although the cool, windy conditions have noticeably retarded the rapid growth that was made during the previous week. A light snow fell during the last two days of the week.

Grasses, clover and alfalfa are well started but have not made a rapid growth during the past week.

Seeding of all crops, except corn, on the rotations has been completed. Increase plots of Supreme wheat and Horn barley were also seeded.

Grasses in plots and alfalfa and clover nurseries were seeded on the forage project. Sweet clover was also seeded on the hog pastures.

Conifer stock was received from Mandan. The replacing of trees in the spruce blocks was completed and most of the pines were planted. A few plum trees received in the shipment, for replacement, were planted.

Maximum temperature 63, minimum 18; precipitation .32 inch.

HUNTLEY:

The past week has been somewhat cool for good growing weather but crops have all made noticeable progress. Wheat, oats, barley and peas are up in the rotations and flax is beginning to emerge on some of the plots. Brome-grass and alfalfa have advanced to the stage where the plots to be pastured are ready for stocking. The hogs for this purpose have been weighed up and will be moved to the pastures today.

Field work has continued without interruption and all small grain seeding with the exception of nursery material has been completed on the the Dry-Land Project. Plowing of corn land and the final cultivation of land for miscellaneous crops was also finished during the week.

Reports of cutworm damage continue to arrive and control measures are being applied where possible. The largest area of winter wheat reported so far, as being taken by cutworms, was 320 acres. In several instances winter wheat damaged by cutworms has begun to make a new growth and although the resulting stands are rather thin, reseeding will not be done.

Maximum temperature 75, minimum 26; precipitation .36 inch.

SHERIDAN:

Seeding operations were continued through the most of the week. Methods of seeding and varieties of sweet clover, and methods of seeding alfalfa and perennial grasses were seeded, as well as the current dates of seeding with spring grain. Ground was prepared for seeding barley for feed, and some barley was seeded.

Stock for planting the extension of the shelterbelt was received from Mandan early in the week. All for which there was room in the ground prepared have been planted, except a part of the caragana. Cloudy and rainy weather has given excellent conditions for this planting, but rain has interfered with completing the planting.

The hogs fed during the winter have been sold and were hauled to Sheridan during the week.

The weather has been fairly favorable for field work, with the exception of the last two days, when rain has interfered. Winds have been higher than usual for this section and there has been considerable soil blowing. Considerable seeding of small grain yet remains to be done in this section.

Maximum temperature 76, minimum 31; precipitation .59 inch.

MANDAN:

Agronomy

The past week has been cool and cloudy, with rain on three days. Part of the week was spent in plowing blocks for corn and forage crops.

Small grains are making a good growth, but were slightly injured by frost during the week.

Some winterkilling took place in the alfalfa during the winter.

A good rain, which started falling on the evening of May 6, and is still falling, has soaked the soil up in good shape. All crops should be in excellent condition for a rapid growth.

The total rainfall for April was 1.37 inches, as compared with the 50-year average of 1.67 inches.
Maximum temperature 76, minimum 29; precipitation 1.18 inches.

Cooperative Grazing Experiment

The 70 steers which were received a week ago were branded on May 6, and 16 head were dehorned. The cattle are not gaining because of a shortage of pasture.

Horticulture

The second planting of vegetables in the Acre garden was made during the week with the following vegetables planted: Potatoes, sweet corn, wrinkled peas, wax beans, carrots, and early beets. Early cabbage, cauliflower, and head lettuce, were also transferred to the field. The first planting is now up, with a fair to good stand of varieties planted.

A few new hedges were started in the experiment with this class of ornamentals. Rabbits caused considerable damage to young hedges planted last year, cutting the new growth down to within 3 inches from the ground, but most of them seem to be alive at the roots, and are sending up new shoots. Indications are for a good lilac year again, as all varieties of French hybrids, common, and lilac species are loaded with buds. The lawns came through the winter in better condition this spring than for many years past. The new lawn of crested wheat grass planted last summer is especially good, being early and vigorous.

Mandan, continued:

Arboriculture

On May 2 a shipment of Caragana and evergreens was sent to the Archer Station for planting in a shelterbelt north of the buildings.

A species Testing Block of Norway pine, which failed entirely last year, was replanted. The hillside at the west end of the Species Testing blocks was again replanted to Norway, Jack, and Scotch pine. All the vacant spaces in the Spruce rows of the Main station shelterbelt have been filled in, and a 25-foot row of Blue and Black Hills spruce, spaced a foot apart, has been added to the trimmed hedge series.

NORTH PLATTE:

The early part of the week was dry with high winds. The last three days have been cloudy with fine mist and light showers, which have produced .50 inch of precipitation.

The North Platte Weather Bureau reports at the end of April, a precipitation excess of 1.81 inches since January 1. This is the first time that there has been a seasonal excess at the end of April at this station since 1920. We are hoping that it is the forerunner of the best season since that time.

Pastures, meadows, and crops reflect the favorable moisture conditions and are considerably ahead of normal for the season.

Preparation of corn ground is nearly complete. Plantings will be made the coming week if weather conditions permit.

Visitors during the week included University Regent Wm. P. Warner, and class in Agriculture from one of the Lincoln County consolidated rural schools.

COLBY:

Winter wheat made more growth the past week than it had made so far this spring. The thin wheat is looking some better but in most places weeds may furnish considerable competition from now on. Barley and spring wheat could hardly look better, while oats, on the project, are too thin to look good at this stage of the game.

Colby, continued:

Work during the week consisted of levelling lister furrows that were put in to stop soil blowing and disking of a field that is to be summer tilled this season. Some work was done on the rotations as cultural treatment previous to planting milo. Friday was rainy and misty all day. Saturday started out the same way but cleared up before noon. Trimming of rotation plots was completed.

Corn planting will start on the station the coming week. Soil moisture is sufficient so that good germination is expected.

HAYS:

The temperature has varied during the week from 41 to 86 degrees. Precipitation total covering the last three days of the week amounted to .73 inch.

Previous to the rains the wheat commenced wilting, expecially on the cropped land. On fallowed land the wheat continued to make growth, and is now two feet high. Oats and barley almost cover the ground and spring wheat looks fine but not quite so much growth. Peas are making good growth. Alfalfa and brome-grass are looking good.

GARDEN CITY:

Rather cool, cloudy weather has prevailed during most of the past week. Rains have been reported in the surrounding country, but only .16 of an inch of moisture was received at the station.

Winter wheat is showing the need of moisture on most of the plots. Considerable burning has taken place on several of the wheat plots.

Field work consisted of disking, plowing and listing for the row crops. There is enough moisture in the surface soil to make it work nicely.

Messrs. E. F. Chilcott, L. F. Locke, and J. B. Sieglinger were station visitors on Monday.
Maximum temperature 85, minimum 44; precipitation, .16 inch.

DALHART:

The past week has been as windy as usual with only slight signs of rain. These windy days are causing considerable soil blowing over this entire section of the panhandle. The sky line looks as if the whole earth were moving.

Dalhart, continued:

Field operations on the station have kept the plots, etc., in shape so that no soil blowing has occurred here. Unless a rain is received sometime soon, listing may have to be resorted to in order to hold it.

The teams have been busy in the fields all week. The first date of cotton was planted on May 2. The next date will be due on the 10th. Work on the field to be planted to the variety grain and forage sorghums will be started the first of the week. This entire field was gone over with the field cultivator this week to prevent blowing and get it in shape to take a little moisture if some should come.

Winter wheat and rye are still alive. On the shallow plowed plots these crops are looking rather sick but on the early plowing and fallows they do not seem to be suffering. The rye is in the boot on some plots and partly headed on others. Plot C.C.A. may not get to head unless some rain should come this way. Oats are making good headway. The only planting of sweet clover which is showing up to anything like a stand is that planted on March 15. Poison was put out this week for rodents, and other wild animals in the habit of feeding on young crops.

Maximum temperature 91, minimum 42; precipitation 0.

TUCUMCARI:

Precipitation since October 1, a period of slightly more than seven months, has totaled 2.34 inches; that since January 1, only .51 inch. Under such conditions a week or two more or less counts but little. Ranges are showing practically no green grass. The old grass is being grazed closer each week, and the wheat which still survives is gradually approaching the end point. Farmers were enthused two months ago, rather blue a month ago, very discouraged two weeks ago, and now seem quite reconciled to the discouraging situation. If rain comes soon, a large wheat acreage will be planted to row crops. If the season remains dry, the wheat fields will be fallowed in preparation for seeding this autumn.

Station work the past week has included repairing fences, working roads, and odd repair work.

Tucumcari, continued:

Mr. J. R. Horton, of the Wichita Entomological Laboratory, was here during the week and examined corn stubble which was "cowpea harvested" at different times during the late fall, winter and spring in an attempt to kill the southwestern corn borer larvae. It was found that a very large percentage of the larvae were killed in those stubble which were uprooted and lay on the ground during a long weathering period. As in previous years, a number of date corn plots will be planted to gain information regarding borer infestation as influenced by date of planting.

Maximum temperature 93, minimum 47; precipitation, .03 inch since March 12. Evaporation, 2.847 inches. Average hourly wind velocity, 6.2 miles.

BIG SPRING:

Weather conditions during the past week have remained unchanged, that is, they have remained dry and hot. The average maximum temperature for the week has been 98° with only two days during this time when the maximum was below 100.

There is no planting being done throughout the county, as there is not sufficient moisture to germinate the seed. The winter wheat plots are practically all dried up with the exception of a little green border around each plot.

The May 1 date of seeding was made on April 30. Sudan grass and Higari of this planting date have come up to good stands, but the other varieties have not yet emerged.

The work this week has consisted mainly of going over the plots with the spring tooth harrow and the smoothing harrow. The duckfoot cultivator and harrow were used on the general fields.

Maximum temperature 102, minimum 57; precipitation .05 inch.

LAWTON:

Corn has fully recovered from frost damage and made considerable growth under the warmer temperatures that prevailed throughout the week.

Lawton, continued:

Grain sorghums planted April 20 came up to good stands for most varieties, except the various strains of feterita. These show but very little germination so far. The second planting of grain sorghum varieties was made May 2. Four varieties of broom corn were planted on that date. The M. C. plats of broom corn and sorgo were planted May 4.

The surface soil has dried rapidly and seed beds on spring plowing will remain very unsatisfactory until more rain is received.

In the first planting of cotton made April 21 the Half and Half, Acala, and Oklahoma 44 show good stands. Germination of Mebane, Rowden, and Russell, so far, is quite poor.

Wisconsin winter barley seeded September 15 and 22 is maturing rapidly and the grain is now in a fairly hard dough stage. In the variety test seeded October 20 all varieties except Orel are in the soft dough to hard dough stage. Orel is somewhat later. An unusually sharp contrast exists between early and late sown barley this year. Barley that was planted after October 20 is short, very uneven in height and growth and thin on the ground. That is apparently a representative condition of the crop at present throughout much of the surrounding country. Barley seeded prior to October 20 has a prospect of making a very heavy yield if sufficient rain follows to complete the present development of the crop.

For some time farmers throughout the county have been expressing apprehension and doubt with respect to satisfactory yields of wheat. The spring growth of the plants has not been entirely normal. Orange leaf rust which developed so extensively during the wet weather in the latter part of March and early in April still persists. Too much dead foliage is now carried on the plants and the top growth appears yellow and unhealthy.

Growth of wheat on the station seems to be considerably above the county average. In fact, the growth is quite rank and the demand for moisture is already very heavy. On fallow and on manured land some lodging has already occurred. Most of the wheat is in the boot and a few heads are appearing. Oats seeded February 3 is about 30 to 40 per cent headed.

A high wind velocity has obtained several days during the week and the maximum temperature recorded was 93.

Mr. E. F. Chilcott was a week end visitor at this station.

WOODWARD:

The weather continued to be dry and somewhat windy during the past week, but the maximum temperatures did not run as high as for the preceding week. On the night of the 4th a severe hail and wind storm, which was reported in the local papers as forming about eight miles north of Woodward and proceeding in a northeasternly direction for a distance of about 75 miles, did considerable damage to wheat, fruit trees, etc., within the area over which the storm passed. A few buildings were demolished at Mooreland, eleven miles east of Woodward, but no hail or rain occurred in the vicinity of Woodward or the station.

Wheat and other growing crops do not appear to be suffering for want of moisture in this locality, but we have had reports that dry weather is beginning to affect the wheat on the hard land in the north and west parts of the county.

Work at the station consisted of disking fence rows, leveling lister ridges, and filling silo, with dry kafir fodder to which considerable water was added, and cutting rye plots on the Dairy project. On the Dry Land project rye hay, which was cut last week on the check and rotation plots, was hauled and stacked and part of the alfalfa was cut and put in the barn. Stalks standing in the fields were cut, peanuts were planted on the 4th, and on the 3rd planting of the second dates of cotton and corn was done. Pruning of peach trees in the variety orchard is in progress today.

Supt. E. F. Chilcott left yesterday, Friday, May 6, on a trip to the station at Lawton, Oklahoma.

Maximum temperature 83, minimum 50; precipitation, trace.
Evaporation, 1.378 inches. Average hourly wind velocity, 8.0 miles.

DICKINSON:

The alfalfa varieties and the plots of alfalfa and sweet clover were seeded on the main rotations on May 5.

Root crops, consisting of mangels, sugarbeets, rutabagas, turnips, carrots, and kale and rape were planted May 6 for the Office of Forage Crops.

Dickinson, continued:

Two-hundred Black Hills spruce seedlings were received on May 7 and planting was started but had to be stopped on account of rain.

Plowing for corn on the rotations was started on the 6th.

Grain crops have made a good growth during the latter part of the week. Stands are all good and there is now enough water in the soil to insure good growth during the spring. Trees and shrubbery are probably about average in advancement for this date, but are about two weeks behind this date last year. Some of the early flowering plums were in full bloom during the last days of April in 1926. To date no flowers have opened on any fruit.

The orchard was cultivated with the duckfoot on the 2nd to stop blowing of the soil. The wind was very high on that day and more soil drifting occurred than on any previous day of the spring. Since that day the weather was favorable with a few light showers. Rain started Friday afternoon and still continues.

Maximum temperature 76, minimum 31; precipitation .63 inch.

BELLE FOURCHE:

The fore part of the week was quite warm and strong winds prevailed a good part of the time. An average wind velocity of 24.4 miles per hour was recorded on April 2, and .426 inch of evaporation occurred the same day. The weather during the remainder of the week was cool and stormy and a large amount of precipitation was received.

All small spring grain plots were duckfotted or double disked and harrowed early in the week, but heavy rains again postponed seeding and resumption of field work will not be possible until after the middle of May.

Maximum temperature 82, minimum 33; precipitation 1.74 inches.

ARDMORE:

The first part of the week was favorable for field work. During that time some of the larger fields to be planted to corn were duckfooted, and all of the plots in the rotations were plowed. Most of the plowed plots were disked and harrowed before field work was interrupted by a misty rain Friday afternoon.

Ardmore, continued:

The pipe lines to the hog pastures were repaired, and the sows and litters put out on pasture during the week. The dairy cows were also put on pasture.

Many of the winterkilled trees and shrubs were rplaced, and the ground in some of the shrubbery plantings was spaded.

The soil in some of the fields crusted badly following the snow and stands of grain in many plots were seriously reduced. Some of the spring plowed plots of grains crusted so badly that a horrowing was necessary to break the crust to allow the grain to emerge. The harrowing was not very effective. The rain during the latter portion of the week softened the crust so that stands may be bettered somewhat.

Soil samples show that the soil is wet to a depth of from three to four feet in cultivated land, and 30 inches of sod land.
Maximum temperature 80, minimum 35; precipitation .15 inch.

NOTE:-

Field men when submitting company vouchers covering charges for telegrams sent should have company attach original telegrams as General Accounting Office will not accept copies of such telegrams.

NOTE:-

UNITED STATES DEPARTMENT OF AGRICULTURE
Director of Personnel and Business Administration
Washington

April 30, 1927.

P.B.A. Circular No. 72.

Penalty Envelopes for Transmittal of Vouchers.

"Recent submission was made to the Solicitor of the Department of the question whether the laws and regulations in the matter of penalty envelopes permitted the use of such envelopes for transmittal to the Department of vouchers executed on the standard form or otherwise by merchants, contractors, or other public creditors. The question arose in view of the practice in some branches of the Department of mailing out such penalty envelopes with purchase order and voucher form. The Solicitor's opinion is as follows:

"The sending of an executed voucher to the Department by one of its contractors is a matter personal and private to the contractor and does not relate exclusively to the business of the Department. The Act of March 3, 1877, 19 Stat. 319 (Section 5), under which the franking privilege is enjoyed, reads in part as follows:

"That it shall be lawful to transmit through the mail, free of postage, any letters, packages, or other matters relating exclusively to the business of the United States.*****"

In view of the foregoing the use of penalty envelopes for the purpose above mentioned is, in my opinion, not legally permissible."

This opinion should, of course, govern Department practice in this respect.

(Signed) W. W. Stockberger
Director.

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U. S. DEPARTMENT OF AGRICULTURE

MAY 14 1927

REPORT FOR WEEK ENDING MAY 14, 1927.
(Unless otherwise indicated.)

HAVRE:

The last four days of the past week were favorable for field work and farming operations have progressed very rapidly at this station as well as in the surrounding farming community. A great deal of the early seeding is up and that which is being seeded now should emerge in the minimum time. Soil moisture conditions are very favorable.

Winter wheat is making rather slow growth due, perhaps, to the effect of some winter injury. Some of the plots will be very good, while on others the stand will be very spotted. Rye is shooting very rapidly and making excellent growth. Some of the older plantings of alfalfa, both dry land and irrigated, show very decided winter injury. Grimm, seeded in rows on dry land in 1916, practically all killed out. Bromegrass and crested wheat grass are still in good condition.

The seeding of grain on the station is practically completed. There are a few miscellaneous tests left, with corn, flax, and potatoes yet to plant.

Just after the report of May 7 was written, this station had a rather disastrous fire. Posts were being treated in the shop with cresote. This caught on fire and seems to have spread by an explosion. The entire group of buildings making up what was originally the Post-Exchange were destroyed. We were using these buildings for shop, store room, horse barn, and hall. The entire contents of the other buildings were removed to safety. Some feed was lost but all of the implements and harness were saved.

The conifers received from Mandan were planted on the 5th and 9th. These included Jack pine, Scotch pine, Norway pine, Blackhill and blue spruce. These were planted under very favorable conditions and it is hoped that the stand will be much better than it was last year.

Director F. B. Linfield was a visitor at the station on the 8th and 9th.

Maximum temperature 68, minimum 31; precipitation .43 inch.

JUDITH BASIN:

A light snow fell during the first two days of the week. This storm, which started the previous week, gave a total precipitation of .70 inch and delayed field work.

Judith Basin, continued:

Favorable growing weather developed during the last two days of the week. The leaves of alfalfa and the early winter wheat plants show evidences of having been nipped by the wind and low temperatures which prevailed during the early part of the month.

The remainder of the conifer trees were planted early in the week, also choke cherry plants which were received in the same shipment. The pasture experiment blocks were cultivated and those in the hog pastures seeded to sweet clover. An increase field of Markton oats was seeded. The large increase field has been prepared for seeding barley.

Maximum temperature 63, minimum 29; precipitation .38 inch.

HUNTLEY:

Field work was resumed May 12 after a three-day period of rain and snow. Temperatures well below freezing followed the storm, causing some injury to fruit blossoms and touching up the newly emerged barley in spots. Since May 11 the weather has been clear but fairly cool and the ground has dried off slowly and team work has been possible only on the lighter soils.

Corn land prepared before the storm was again harrowed and the crop was planted in the rotations yesterday and is being planted in the pasture and miscellaneous experiments today. Practically all of the early sown crops are now up and although they show the need of warmer weather they appear to be in good condition, generally.

Fall pigs were placed in the alfalfa and brome-grass pastures a week ago but the spring pigs have been retained in the pens until they are vaccinated. This will probably be done today, Saturday.

Maximum temperature 69, minimum 21; precipitation .92 inch.

SHERIDAN:

Heavy rain fell the afternoon and evening of the 7th, followed by snow accompanied by a heavy wind during the next two days. A temperature of 17° was recorded on the 10th. Some fairly hardy vegetation, including alfalfa, was damaged considerably. Grain showed no effect from the freeze. Little growth of any vegetation was noticeable from the 7th to the 12th, but during the last two days grass and grain has been making quite noticeable growth.

Sheridan, continued:

Seeding was possible on light soil Thursday, where snowdrifts did not interfere. Barley for feed and fields of wheat and oats for increase have been seeded. Some of the new breaking has been disked in preparation for corn and barley. Field work in general throughout this section is very late. Losses of lambs during the storm were reported to be heavy in various sections.

Maximum temperature 67, minimum 17; precipitation 1.42 inches.

DICKINSON:

The rain which began on Friday of last week turned to snow on Sunday evening and reached the blizzard stage for a time. The snow drifted badly so that roads were impassable with cars for two days. The total precipitation during the storm was 2.87 inches. About 12 inches of snow fell. Some of this still remains where the drifts were highest.

Some loss of stock occurred during the storm where the animals were exposed and had been greatly weakened by lack of feed.

A minimum temperature of 24 degrees was recorded. This freeze apparently did less damage to plants than the sleet and wind during the storm. Fruit was so backward that most of the buds seem to have come through alive.

On cultivated fields all of the rain and snow went into the soil. Wheat seeding was practically completed in the district so the outlook for a crop is better than in the eastern part of the state, where seeding has been delayed by wet weather.

MANDAN:

Agronomy

Field work was resumed on May 11, after the heavy rains of the previous week. The soil is wet down four feet on land that was fallow last season, 3.5 feet on land in corn last year, and 3 feet on plowed grain stubble. There was considerable washing in the south field.

The past week has been cool and windy. On May 13 the wind blew very hard, and soil blowing took place on the west side of Field M. There was no serious damage done from present indications. Soil blowing, however, was very serious in some parts of the county, and many acres of wheat have probably been entirely ruined. The wind is again blowing hard today.

Mandan, continued:

Plowing and harrowing for corn will be completed today. Potatoes were planted in the rotations. Brome-grass, slender wheat grass and crested wheat grass were seeded in the forage crop series. This seeding was on land where the same crops were seeded last year. The stands then were very poor because of the dry season of 1926.

Maximum temperature 70, minimum 28; precipitation 1.91 inches. Total precipitation for May to date, 4.55 inches.

Cooperative Grazing Experiment

The prairie is now green and affords fair grazing. The growth of the grass has been rather slow, no doubt because of the cool weather. With a few warm days grazing should be very good. The rains of the past week should assure good pasture, and a fair hay crop of native vegetation.

All fences have been gone over and given the necessary spring repairs.

The dam in the reserve pasture is completely filled with water, and with normal rains should furnish water throughout the season.

The cattle appear to have recovered from the branding, and dehorning of a week ago, and should be in good condition to start on pasture next week.

Horticulture

Potatoes were planted on May 13. The usual variety test and spacing experiments are being carried on.

All orchards and fruit gardens are now being cultivated for the first time this season. Recent rains and warm weather have started the weeds growing.

Fruit trees are now starting to bloom. As much outdoor crossing is being done as time perimts.

Further observations strengthen an earlier opinion that there was little winter injury to fruit trees last winter.

Mandan, continued:

Second planting of vegetables in the Acre and Coulee gardens was done during the week. This included wrinkled peas, wax and shell beans, melons, squash, pumpkins, cucumbers, beets, and second seeding of carrots. Early cabbage and head lettuce were transplanted to the field.

Work has been started digging over the shrubbery and flower groups on the lawns. The next shrub to follow the Chinese apricot to blossom is the Golden currant (Ribes odoratum). The yellow blossoms of this shrub are not very conspicuous, but their fragrance makes the shrub distinctly pleasing and desirable.

In the Arboretum, the Siberian almond, (Amygdalus nana) Japanese quince (Cydonia japonica) and Redberried elder (Sambucus racemosus) are in full bloom. All three are apparently quite hardy, and very desirable for ornamental purposes in this region.

Arboriculture

The work of lining out about 20,000 river pulled ash seedlings, and 17,000 Northwest poplar cuttings was finished on May 11. Four bales of conifer seedlings from the Forest Experiment Station, Cloquet, Minnesota, arrived on the same day, and the work of lining them out in the nursery rows has been nearly completed today, Saturday. These seedlings consist of White, Black Hills and Blue spruce, Scotch, Norway and Jack Pine.

BELLE FOURCHE:

An unusually heavy rain occurred during the first two days of the week, which totaled 2.87 inches of precipitation. As the ground was well soaked from the rainfall of the previous week, a great deal of runoff took place which did considerable damage. The water cut deep ditches across some of the rotation plots and covered about two-thirds of one of the continuously cropped winter wheat plots with 3 to 4 inches of soil. The rain was followed by a light snow and below freezing temperatures.

A total precipitation of 4.65 inches was received during a period of 7 days, May 4 to May 10. This is 2 inches greater than the 19-year average for the month of May, and is also next to the heaviest precipitation for May on record at this station. The total precipitation from April 1 to date is 8.57 inches.

Maximum temperature 66, minimum 27; precipitation 2.91 inches.

ARDMORE:

The past week as a whole was unfavorable for field work. A heavy rain and snow the first part of the week soaked the ground thoroughly and only a few of the fields dried off enough to be worked before the end of the week. The variety corn was planted on May 13, and some of the small fields were planted May 14. Many of the corn plots in the main rotations are still too wet to be worked.

The storm period commenced with a drizzle on May 7, and changed to a heavy rain during the night. The rain continued intermittently most of May 8. In the early evening of May 8 the wind changed to the northwest and increased to a gale. The temperature fell below freezing and about nine o'clock p.m. snow commenced to fall. The amount of snow was not large but the little that fell drifted badly. The temperature dropped to 29° and the low temperature combined with the high wind did much damage to vegetation. The leaves on nearly all trees and shrubs were frozen and the flower buds on nearly all plants were killed. Alfalfa was only slightly injured. Losses of live stock were heavier than in any storm during the winter.

During this storm Hat Creek was out of its banks the fartherest that it has been in the last four years.

Soil samples were taken on May 14 and no dry soil was encountered on any of the plots.

Maximum temperature 66, minimum 29; precipitation 1.62 inches.

ARCHER: Week ending May 7.

The fore part of the week was marked by fair weather. The latter part was threatening with high wind velocity. The humidity was close to the saturation point a considerable portion of the time.

Field work consisted of seeding wheat, oats and barley on the Dry-Land plots, duckfooting in the experimental and dairy fields and disking in the east dairy field.

Trees arrived Thursday. Friday and Saturday were spent planting them. During these two days most of the trees received from the Northern Great Plains Field Station were planted and considerable re-setting was accomplished.

Director W. L. Quayle visited the station Wednesday, May 4.
Maximum temperature 75, minimum 27; precipitation .02 inch.

ARCHER:

Due to the very severe storm of May 1 and 2 it was impossible to get the report for the week ending May 7 to the Post Office in proper time.

As a result of the storm, drifts more than six feet high were deposited about the farmstead. In the shelterbelt to the west of the houses the snow is more than three feet deep at this writing. Due to snow drifts in the field, all field work was discontinued until Friday. However, since Tuesday tree planting has occupied the time of the farm force. This work was practically completed Friday, and today a full force is at work.

Field work in progress consists of seeding cereal varieties, duckfooting dairy field south of the farmstead and disking the east dairy field.

Maximum temperature 75, minimum 21; precipitation .86 inch.

AKRON: Week ending May 7.

The week was favorable for field work. The Rotation corn and sorghum plots, the second and third replications of the Rate and Spacing Corn Experiment, and Sheep Rotation Farm 51 corn field were plowed and packed. The fall plowed corn and sorghum plots were duck-foot cultivated. The Variety Corn Experiment ground was duck-foot cultivated. Manure was hauled out and scattered over the orchards. Volunteer grain in the Rate and Date Winter Wheat Experiment was rogued out. This volunteer grain was especially thick at the north end of the series on the first replication where the flood waters of last July and August had drifted loose grain. Rotation roads were staked out on Saturday, preparatory to trimming the plots.

Winter wheat has come out wonderfully the past week. Stands that looked entirely too thin before sprang up to give good ground cover by the week end. The orchard continued to break into bloom, the plums being practically all in full bloom by the week end and the apples and cherries are breaking into full bloom. Orchard and forestry trees are breaking into leaf. The orchards were spring tooth harrowed early in the week and the surface drain in the west orchard was opened out so as to carry off flood waters.

Mr. E. J. Maynard, of the State College, was here Friday, the 6th in the interest of the Sheep Rotation Bulletin.

Maximum temperature 83, minimum 37; precipitation .19 inch.

AKRON:

A severe storm broke over this region Sunday, May 8. The temperature was below freezing, snow fell, and a northwest wind held a 24-hour average velocity of 22.3 miles per hour. This wind did considerable damage to property throughout the countryside, particularly to wind mills. The only damage noticeable here on the station was the blowing over of some of the dead cottonwood trees in the forestry and the blowing over to a leaning position of seven of the Western yellow pines in the forestry. These trees were forced back into position and braced.

The cereal ground for corn and fallow was duck-foot cultivated to finally rid the soil of volunteer grain. Rotation and rate and spacing corn-land winter wheat alleys were cultivated. Weeds were raked off the perennial forage variety experiment and off the methods of seeding sweet clover and alfalfa experiment, and burned. Millet was seeded on the rate and spacing corn experimental land, and the rate and spacing corn experiment was seeded today, Saturday. Other work consisted of hauling brush, hauling manure, and retagging stored grain.

The storm the fore part of the week was very severe on the fruit. The plums were in full bloom and the apples and cherries were breaking into bloom. This week end it appears that the plums and the pears have been entirely destroyed but that the apples and cherries may yet set a good stand of fruit. The apples and cherries are again in full bloom and the blossoms show no frost damage. Foliage was frozen off the caragana and other shrubs and trees just breaking into leaf.
Maximum temperature 82, minimum 26; precipitation .62 inch.

NORTH PLATTE:

The storms which were general over the middle western states early in the week caused considerable damage in this locality. Terrific wind accompanied by dashing rain struck between 6 and 7 o'clock Sunday morning. Small buildings were overturned and trees broken off or uprooted over a wide territory. The worst havoc in this locality was about five miles west of the station. A tornado swept a path completely across the valley, completely demolishing about ten sets of farm buildings. No deaths resulted and the injuries were unusually few considering the amount of property damage.

Corn was planted on the D. L. A. plots May 11-12. This is several days later than the average date.

COLBY:

The past week started off with a decided rush. On Sunday and Monday the wind velocity reached a velocity heretofore unrecorded. The average velocity as recorded on the 8-ft. anemometer from 8 o'clock Sunday morning to 6 o'clock Monday evening was approximately 39 miles per hour. Velocities ranging upwards of 45 miles per hour were read for shorter periods. The wind started in from the southeast Sunday morning but changed during the afternoon by gradually shifting clockwise until by Sunday evening it was west by northwest. Before the wind finally abated on Tuesday it was approximately in the northwest. The temperature dropped on Sunday night to 33° and again on Monday night to 34°. There was some moisture amounting to .04 inch which fell Sunday night and which froze as it fell. Traces of snow were noticeable at times. During the day Sunday the air was filled with fine dust which was being carried from a distance but by Sunday evening the soil in this section had begun to shift and blow. On Monday there was considerable soil blowing in this immediate vicinity. Considerable soil blowing occurred on land that was short of vegetation and that had a crust from the previous hard rain. Considerable soil blowing occurred on the station.

The D. L. A. project showed very little effect of the blowing in the way of drifts but some bare plots had the crust removed in spots. One field of wheat on the station was very severely punished, but only time can tell the ultimate damage. Spring grains and winter wheat had much the appearance of a heavy freeze after the wind had ceased.

The spring grains and the thin, short winter wheat have shown much recovery on Friday and Saturday. The rank wheat, in the south part of the county, is in many fields dried out and brown in appearance. Examination shows the embryonic head to still be green. This would indicate that with moisture this wheat could still continue to grow and make a good crop. Actually, right now, it does not appear very promising.

All D. L. A. plots and the corn varieties were planted on Thursday and Friday of this week. There is sufficient moisture to insure good germination. Saturday a start was made on the commercial field of corn.

Maximum temperature 87, minimum 33; precipitation .08 inch. Evaporation 1.588 inches. Maximum 24-hour wind velocity with 8-ft. anemometer, 37.6 miles per hour.

GARDEN CITY:

Considerable damage was done to the small grains during the first part of the week by the high winds. On the 7th the wind velocity averaged 20.8 miles, on the 8th 23.6 miles, and on the 9th 18.7 miles per hour. Although higher wind velocities have been recorded, these winds carried so much dust that it was impossible to see for a very great distance. Winter wheat, which was already short of moisture, burned badly during that period. Considerable soil blowing took place last Sunday and Monday, but no damage from that cause was done on the station.

A minimum temperature of 31° was recorded the morning of the 10th. No damage from the low temperature could be seen, however.

Field work consisted of listing the plots to be fallowed this season, spring tooth harrowing plots that were fallowed last season, and taking soil samples on the area that is to be winter irrigated.
Maximum temperature 93, minimum 31; precipitation, Trace.

DALHART:

This week this section of the Panhandle was visited with one of the worst wind storms on record. It was impossible to get an accurate test on the wind velocity here on account of protection afforded by the buildings, etc., from the direction of the wind. The Amarillo Bureau showed an average of 45 miles per hour, which was about in line with the wind we had which lasted from about midnight Saturday until Sunday night about 8 o'clock. The fields, plots, etc., on this station were in pretty fair shape to resist soil blowing but not sufficiently so to resist a wind like that. In places it furrowed out the soil in a similar manner to a heavy washing rain. Considerable damage was done to the grapes which were in bloom. The wind and sand took about all the leaves off most of the trees and shrubs. The south field held in pretty good shape, there being no damage from soil movement there. The north field nearly changed locations. Sand was piled about 16 inches deep in the west end of the rye plots on rotations 166 and 167. The heads were cut off just as if a mower had been over it. Soil blowing was everywhere that day. Even sod fields which had just been listed blew badly.

No rain was recorded during the week. The soil is dry but this has not delayed the field work. The Cereal-forage block was plowed this week and prepared for planting. The first date of grain and forage sorghums is being made today. There is a little moisture in some places, other places are hard, dry and lumpy. The second date of cotton was also planted this week as per schedule. The Jerusalem artichokes which were planted in late April are up to a fair stand.

Dalhart, continued:

The winter wheat, oats and winter rye in the south field are still alive. The wheat on fallow is still looking good. That on other methods is rather spindly and making short heads. The rye on some rotations is making a good height and heading with a good stand. Some rotations beside the ones with good stands are practically dead. The wheat has stood these conditions better than the rye. Oats are making good headway yet.

Maximum temperature 88, minimum 31; precipitation 0.

TUCUMCARI:

From late Saturday night until Monday morning the worst wind storm on record raged throughout this locality. The average velocity on the 8-ft. anemometer for the 24-hour period ending 8:00 a. m. Monday was 36.1 miles, while the 2-ft. instrument showed an average of 24 miles per hour. Leaves on grapes and orchard and shade trees were in most cases blackened and singed by wind and sand until as crisp as cured leaf tobacco. Many grape blooms were injured by sand, while a portion of the scant fruit crop was blown from the trees.

Furrows in listed fields were filled to overflowing and many listed fields blew as badly as those unlisted. It has been so dry the past six weeks that plowing and listing have been impossible on the station, but this did not prevent some portions of fields from blowing out as deep as old furrow bottoms. Blown sand about two feet deep and from ten to twenty feet wide, now occupies a sixty rod portion of the road leading from the station to highway No. 66. Ten truck loads of sand were hauled from the roadway surrounding the ornamental circle, while the greater portions of lawns are under sand one to six inches deep.

No progress has been made in field work for over a month and farming over this portion of the state is at a standstill. No previous spring has ever approached this year for severity of drought, with only .51 inch precipitation since December 24, a period of nearly five months

Cattle and sheep are in surprisingly good condition, for while the range is short and practically no green grass is appearing, the mild weather throughout the winter was not severe on live stock. Grazing was good in late fall and most animals have been fed reasonably well. Both the calf and lamb crop should be heavier than usual, but cake feeding will have to be continued until rains sufficient to start new grass are received.

Maximum temperature 90, minimum 37; precipitation 0.

Evaporation, 3.027 inches. Average wind velocity, 2-ft. anemometer, 9.4 miles. Precipitation, .02 inch in January; .34 inch in February; .22 inch in March; .03 inch in April. May to date, None.

BIG SPRING:

Weather conditions during the past week have changed somewhat from those of the week previous but these changes have not been altogether favorable. A heavy wind started blowing Saturday night and continued for 48 hours. During this time considerable soil movement took place. Many fields that had good stands of early feed and cotton were entirely covered up with sand.

On the night of May 12 a light shower fell but this was only an aggravation. Only a total of .28 inch fell and this only soaked the soil to a depth of two inches.

Work this week has consisted of sand furrowing and in going over some of the fields with the duckfoot cultivator. Other work consisted of painting stakes and shelling peanuts for the variety test.
Maximum temperature 100, minimum 47; precipitation, .28 inch.

LAWTON:

On the 8th, 9th and 10th the wind blew steadily at an almost continuous high velocity. The soil on cultivated fields was heavily sapped of moisture, and wheat and winter barley evidenced the need of water. Large, deep cracks permeate the ground wherever small grain is growing.

Following the period of high winds the daylight temperatures have been moderate and the night temperatures quite cool--entirely too cool for cotton. Partly cloudy weather the last two days of the week terminated in a rain of .47 inch on the 14th, falling within a very short time. The ground was so dry and badly cracked that but little water was lost by runoff. On cultivated ground there was practically none. This rain temporarily relieves a critical condition that was rapidly becoming acute with respect to small grain crops, for it is the first moisture received since the torrential rains previous to April 13.

All crops in the rotation fields were planted during the week and the third planting in the grain sorghum project was made on the 14th.

Spring planting of all kinds will be completed within the next two or three days. Good germination should now be obtained with the improved surface soil conditions.

Lawton, continued:

Winter barley seeded September 15 and 22 was harvested May 14. The crop attained a height of 33 inches and was well headed but the dry weather during maturity sharply reduced the yield. Winter barley varieties will probably be harvested during the coming week.

Mr. L. W. Osborn, Extension Agronomist, Stillwater, Okla., visited the station May 13.

Maximum temperature 86, minimum 41.

WOODWARD:

Ninety per cent of land in this section is in winter wheat and this is now in a precarious condition due to continued drought. It seems that a rain within the next few days will mean all the difference between failure and assurance of a medium to good crop. Everyone is, therefore, tense over the situation.

Pea aphis, which have been spreading from field to field of alfalfa over the past three seasons and were particularly numerous and destructive early this spring, seem to have almost disappeared, due probably to ladybird beetles and other enemies. Grape leaf hoppers seem particularly numerous in the vineyard this spring and no very practicable and effective means of control has yet been worked out.

Work of the week consisted of spraying orchard for the second time; planting third date of cotton in date test; planting row cotton variety test of 21 varieties; plowing land for cereal work; leveling land on dairy farm which was listed earlier, and finishing pruning of peach orchard. For several years peach trees have not been pruned until danger of frost is past, and then have been pruned according to amount of fruit remaining on them.

Sunday, the 8th, one of the hardest winds of recent years continued practically all day and more soil drifting occurred on the station than at any time since its establishment. Drifting was due to carelessness as to condition of fields, as so hard a wind so late in the season is not expected.

Maximum temperature 93, minimum 38; precipitation .15 inch.

Evaporation, 2.058 inches. Average hourly wind velocity, 8.3 miles.

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DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 21 1927

REPORT FOR WEEK ENDING MAY 21, 1927.

HAVRE:

Due to rain and cloudy weather there was only one day which was really fit for field work during the past week. A total of 1.85 inches of rain fell on five days and there is a cold steady rain falling at this time on the 21st. Crops that are in are making fair progress. Real early seeding is growing faster and is showing indications of stooling. Winter rye is making an unusually heavy growth, while winter wheat is rather slow but has good color, and where the stand is good the crop should make a fair yield.

Trees are leafing out very slowly. Practically everything is started but with the exception of the box elders, none of the leaves are one-half size yet. A great many of the wild plums and plum hybrids in the orchard began blooming during the week. Most of the trees show a very heavy bloom.

Grass is making an unusually good start. With the conditions this spring there is much more western wheat grass on the benches than is usually the case. June grass began heading during the week but is very short.

There are very few parts in this section of Montana where the seeding is over 50 per cent complete. There are sections in which not over 25 per cent of the small grain crop is in at this time. This is probably the latest spring that this section of the country has experienced since farming operations began. We have been in the field, to date, only 18 days.

Prof. F. M. Harrington, Horticulturist from the Montana Experiment Station, was at the station on the 14th and 15th.

Maximum temperature 80, minimum 31; precipitation 1.85 inches.

HUNTLEY:

Field work was possible every day of the past week except yesterday and today. Corn varieties, grain nursery and some other miscellaneous plantings were made. Soil sampling was continued.

A torrential shower was received Thursday evening which resulted in minor damage to seedling grass and garden crops by beating them into the ground and washing soil over them. Considerable runoff occurred, leaving ponds of water standing in low places in the fields. Following the first downpour, the rain has continued as a drizzle for the past 36 hours and is still in progress.

Huntley, continued:

Although temperatures during the day have been fairly high this week, night temperatures have been rather low, bordering on frost, and crop growth has consequently not been as rapid as is usually expected at this date.

Maximum temperature 85, minimum 32; precipitation, 1.23 inches.

SHERIDAN:

With the exception of three warm days early in the week, the weather has been cool. Grain has made slow progress, but grass has been making a rapid growth. The stand of oats is poor, much of this crop appearing as though eaten off by cutworms, although none of the cutworms have been found. All grain is stooling well, however, where sufficiently far advanced.

Conditions generally have been favorable for field work. Plowing for corn and flax has been completed, the fall plowing for these crops has been cultivated with the duckfoot cultivator, and the corn stubble ground for flax also duckfooted, weeds having made too great a growth for a good job with the disk. The ground in the rotation field was still too wet at the time of plowing to work well, but a heavy rain last evening has put it into condition so that it should work up in good shape when dry enough to harrow. Potatoes were planted yesterday, May 20.

Maximum temperature 83, minimum 38; precipitation .83 inch.

DICKINSON:

Cool weather continued through most of the week with light showers on three days, and a rain of .81 inch on the night of the 20th.

Plowing for corn on the rotations was finished on the 20th. The plots will be planted on the first suitable day.

Corn varieties were planted on the 18th and 19th, and flax varieties on the 17th.

Land has been prepared for seeding corn on the blocks which alternate with cereal varieties. The land was also prepared for seeding about five acres of crested wheat grass on the Normal School field.

Plots were worked on the 20th for the plow vs. duckfoot fallow.

Dickinson, continued:

Grain crops have greened up nicely though growth was slow due to cool weather.

Alfalfa and sweet clover fields are showing up spotted due to the thinning out during the winter. In the variety test of alfalfa, the Ladak and Grimm came through with the least loss. The Argentine, Turkestan, and Dakota Common have thin stands left.

Crested wheat grass continues to show more growth than any other forage crop.

The first plum blossoms were open May 18, fully three weeks later than in 1926. Plenty of blossoms are opening, indicating that the low temperatures during the recent storm had little, if any, effect.

Maximum temperature 83, minimum 36; precipitation 1.11 inches.
Precipitation to date in May, 4.31 inches.

MANDAN:

Agronomy

With the exception of one day, the past week has been cool and cloudy, with rain on three days.

Corn planting has been in progress most of the week. All corn has been planted with the exception of the corn breeding block. Corn was planted in the rotations May 18, which is one day earlier than the 13-year average.

Flax and the late wheat were seeded during the week. Small grains are all looking good, but growth is slow.

Another good rain came on the night of the 20th, totaling .88 inch. The total rainfall for the month to date is 5.52 inches, which is .22 inch less than the all-time record for May for this section.

Maximum temperature 83, minimum 35; precipitation .97 inch.

Cooperative Grazing Experiment

The cattle were divided and started on the various pastures during the week. The average weight per head was 734 pounds.

Grass has made a fair growth in most of the pastures, but, in general, growth of the vegetation has been slow.

Mandan, continued:

Horticulture

All orchards and small fruits have been cultivated for the first time this season.

A considerable number of plum blossoms have been emasculated in the field, but wind and rain have hindered crossing work. Very few insects have been working among the blossoms this year, as cold, windy weather has prevailed since the trees started blooming.

Eight trees in the Virginia crab orchard were fertilized with sodium nitrate, to study the effect of this fertilizer on June dropping of the fruit. Four of these trees will be watered as well as fertilized.

The corn breeding plot has been planted to 360 selections.

The lawns have been mowed and raked, and groups of trees and shrubbery on the grounds are being spaded. Spirea arguta is now in bloom.

Arboriculture

The lining out of the pine seedlings received from Cloquet Forest Experiment Station, was finished on May 17. The following day the two-year old seedlings grown in our own beds were placed in nursery rows. These included Western Yellow pine, Scotch pine, Jack pine and Colorado Blue spruce.

The 1-year old seedlings in the main shelterbelt nursery were given their first cultivation, and work started in cleaning out the dead trees in the experimental tree blocks.

Visitors of the week included, Messrs. R. R. Graves, In Charge, Specialist in Dairy Cattle Breeding; John H. Shepperd, Chairman, Animal Husbandry Department, N. Dak. Agricultural College; Orris Roberts, Associate Meteorologist, Bismarck, N. Dak.

ARDMORE:

The corn in the rotations and in some of the large fields was planted during the week. The soil in the 40-acre field remained so wet from the rain of the previous week that only one day's disking could be done on it during the entire week. The potatoes in the rotations were planted on May 21.

Ardmore, continued:

The steer wintering experiment was brought to an end during the week, and the steers used in the grazing experiment were moved to their pastures on May 21.

Dr. Buckley, of the Animal Husbandry Division, vaccinated the pigs at the station on May 18.

A considerable amount of fence repairing was finished while the fields were too wet to be cultivated.

The temperature for the week as a whole was below normal, but there was no freezing weather.
Maximum temperature 86, minimum 36; precipitation .24 inch.

ARCHER:

The week, for the most part, has been favorable for field work. Due to rain of .28 of an inch, which occurred on the night of May 19, work in the fields was not resumed until 10 o'clock the following morning.

The seedings of the varieties of oats and barley and the method of seeding wheat have been completed. Most of the potatoes were planted today, May 21. Disking in the large east dairy field is nearing completion. Increase areas of corn land in the experimental field have been plowed. Preparations have been made for the seeding of corn, flax and millet.

All tree removing and planting was completed this week in order to comply with contemplated road changes.
Maximum temperature 83, minimum 34; precipitation .28 inch.

AKRON:

The week has been favorable for field work. The middle of the week was cloudy with southeast winds prevailing but no rain fell. Corn seeded during the week on spring plowed land went into dry ground but that which was listed on spring worked soil went into mellow moist soil. It would seem that the listed corn might emerge but there is but little hope for the surface planted corn until a shower is received.

The rotation corn and sorghum plots and the rotation extension corn plots were staked and seeded early in the week.

Akron, continued:

The sheep rotation corn fields were seeded. Millet was seeded in the general forage variety experiment and on plots on the rate and spacing experiment corn land. Soy bean varieties were seeded about the middle of the week. Siberian and Gold Mine millets were seeded on fallow for increased seed supplies. Akron White corn and Early Sumac sorgo were seeded on fallow for increased seed supplies. The new orchard up by the railroad was cultivated. Odd blocks of fallow were cultivated with the duckfoot cultivator. The sheep rotation corn fields were harrowed immediately after seeding to insure better cover of the seed. The shearing of the sheep has held the attention of the most of the station force this week end.

Rye is breaking into head. The more vigorous plots of winter wheat are about ready to joint. All spring grains are up and growthy. The plums appear to have all been killed by the severe weather experienced on the 8th. Cherries and apples have since blossomed and the vitality of a large percentage of the blossoms does not seem to have been impaired. Persian lilac is in bloom. The Spirea Van Houttei appears to have winter killed so badly that it will not bloom. The Wiegalia on the north side of the office building killed back to the ground for the first time since 1920.

Mr. Bruce Thornton and Mr. Smith, from the Agricultural College, were here Friday. Mr. Thornton planted the Cereal Rust nursery and Mr. Smith was interested in obtaining plant specimens for the College Herbarium.

Maximum temperature 77, minimum 41; precipitation 0.

JUDITH BASIN:

The past week has continued cool, cloudy and windy with temperatures showing only moderate fluctuation. Light showers fell during the week and rain continued steadily during part of the last day until it changed into a light snow.

Trees have leafed out and grasses, alfalfa and early winter wheat have made a noticeable growth. Spring grains are emerging slowly but with good stands.

It was necessary to reseed winter wheat on the poorer methods of the continuous cropping series. A few farmers have also reseeded winter wheat on fields that were badly blown or on poorly prepared fields where weeds were a menace.

Judith Basin, continued:

Annual forage and root crops have been seeded on the forage crop project. Sweet clover was seeded on the cow pastures experiments. The seeding of a thirty acre field of barley was completed. Corn and potatoe land, on the rotations, has been plowed as well as land for potatoe experiments.

Professor F. M. Harrington, Horticulturist, of the Montana Experiment Station, visited the station.
Maximum temperature 73, minimum 34; precipitation .45 inch.

BELLE FOURCHE:

Cloudy unsettled weather has prevailed throughout most of the week. A heavy rain of .80 inch precipitation was received on May 20, and several light showers occurred during the preceding three days.

Field work was resumed early in the week. All small grain plots in the rotations were spring tooth harrowed and staked, but the heavy rain again postponed seeding.

Visitors were, Mr. D. V. Kopeland, of the Ardmore Field Station, Dr. S. S. Buckley, of the Animal Husbandry Division, and Mr. S. Lockwood, of the Bureau of Entomology.
Maximum temperature 83, minimum 37; precipitation .93 inch.

NORTH PLATTE:

No rain has been received since the storm of two weeks ago. The rain at that time was a heavy downpour and the surface soil, where not cultivated, has dried into a hard crust. High winds have occurred at frequent intervals. Some of these have carried clouds of reddish dust high in the air. We suspect this dust to be of Oklahoma origin.

Temperatures have fluctuated widely during the week. A maximum of 98 was recorded on the 18th and a minimum of 40 on the 19th.

No late frosts have occurred and, except for wind damage, ornamental shrubs on the station are making the best showing in the history of the station.

Good progress has been made in corn planting during the week, on the station and in the locality. Grains are making a good growth, but under heavy winter grains, soil moisture is about exhausted. This is quite evident where winter rye hog pastures are being plowed up for corn.

COLBY:

Corn planting on the station has been completed. Corn that has been planted one week or more has emerged to stands or has emerged thicker than a stand where seeded thick to permit thinning to comparable stands. There is sufficient moisture for that seeded the first of the week so that a stand should result. It has taken approximately 7 days for emergence on listing, 6 days for emergence on fall plowing, and 6½ days for emergence on spring plowing. Some showed sooner than this would indicate, but that in general is true. Sorghum planting on the station will probably not start this next week, waiting rather until the first week of June.

All plots that are regularly plowed for summer fallow were plowed during the week. The soil was apparently quite moist enough but it crumbled very rapidly and appeared lifeless which is probably due to extreme drying out last year and also to action of the wind.

Climatic conditions have been rather discouraging the week just ending. The maximum temperature for the week was 101 on the 17th. This was exceptional for this time of the year. Wind velocity was high the latter part of the week. Friday evening and night the velocity was high and the amount of soil in the air was approximately 100% of the carrying capacity. This also held true for most of the afternoon today. Moisture in thick or rank wheat is being rapidly depleted and is past the "wilting point" in many fields and has been for some time. The thin wheat is not showing the effect of the unfavorable weather at this time. Spring wheat on fall plowing and on corn ground is beginning to fire. This would indicate that barley, which has been looking fine, will suffer severely this next week unless rain comes soon. The number of optimists who expect a crop this season is diminishing quite rapidly.

Maximum temperature 101, minimum 45; precipitation .19 inch. Precipitation for the month to date, .43 inch. Evaporation for the week 1.995 inches.

HAYS:

The weather during the past week has been dry and warm with considerable wind at times, and the first hot wind of the season, May 20, with a maximum of 99 on that date. The minimum for the week was 47. Precipitation for the week .96 inch.

Winter wheat on all plots has been suffering extremely, expecially during the last week from drought and wind. It commenced suffering May 8. Up to May 7, with timely showers and favorable temperatures, the small grains had been making rapid growth. The winter wheat was about two weeks in advance of normal and the growth was very rank on fallow; however, wilting was observed at that time, which indicated the moisture supply was running low.

Hays, continued:

May 8 was a record breaker for May wind velocity, the average being 27.1 miles per hour for the 24-hour period ending 8:00 a. m. May 9. The wind was in the south, the record for the day preceding was 18.8 and the day following it was 19.5, from the north. The continuous wind first from one direction and then from the opposite direction was too much for the growth of wheat with little water in the ground. It was badly whipped and the blades bruised, and many of the stalks were broken down at the top joint. After the few days of wind the fields smelled like fields of new mown hay. With another week of dry weather following those conditions, with one day of hot wind which was heavy and the maximum temperature at 99,--this certainly makes the wheat look sick. It is no doubt damaged, but to what extent no one knows at this time. The fields, or many of them, present tho appearance of beginning to ripen on account of the dead foliage, but as a matter of fact the most advanced fields are only about 30% headed. Some fields have no heads showing, but most of the wheat is in the boot. Many of the heads will have difficulty getting out of the boot.

There is some fly in the wheat which has added considerable damage. A few fields southeast of Hays are being plowed up because of fly damage. While it is true the fly has contributed considerable damage, it is the opinion of the writer that most of the damage is due to drought and wind. Because of the timely little showers during the spring which have kept the wheat making good growth up to about May 7 people generally believe the precipitation was heavier than it really was and they seem to be unable to realize how dry the subsoil is.

Barley is heading, perhaps now 10% headed. This was damaged some by the hot wind May 20. Quite a little of the straw was broken by the wind at the first joint below the head. Oats are in the boot, with some heads about to emerge. These spring grains and spring wheat are about 12 inches high.

Rye is about all headed and ready to plow under. Peas, alfalfa, and brome grass (new seedings) are coming along fine.

All corn plots were planted today. The ground was in fine condition for planting. Poison bait was spread to protect the stand of corn from injury from mice and ground squirrels.

GARDEN CITY:

Unusually high winds and temperatures during the past week have lowered wheat prospects. The writer drove about thirty miles north last Sunday and fifteen miles south Tuesday. Much of the wheat seen was so badly fired that recovery looks impossible. Several farmers have started plows and disks in their wheat fields.

Garden City, continued:

Conditions yesterday were severe on all vegetation. A maximum temperature of 99, a wind velocity averaging 23 miles per hour, and evaporation amounting to .689 were recorded. Spring small grains show some damage this morning.

The first planting of sorghums was made on Monday in a dry, loose seedbed. Some fallows were listed during the week.

Mr. H. R. Sumner, Extension Agronomist, was a station visitor Wednesday.

The maximum temperature of the week was the highest on record for May at this station.
Maximum temperature 103, minimum 47; precipitation, Trace.

DALHART:

The most consistent thing to report on this week is the wind which has been blowing strong. Almost every day this week the wind has not only been blowing strong but hot. These hot winds were almost scorching.

The plots were prepared for corn and peanut variety planting this week but these were not planted. Planting will be delayed until a rain is received on account of the condition of the soil on some of the plots. The soil is not only dry on a number of the plots but turned up in hard clods making a seedbed unsuitable for planting. The whole north field had to be listed this week in order to check soil blowing. This is the first time in eight years that the cultivator has not held the soil from blowing. Lister furrows were run about 10 feet apart over the field on nearly all plots. This turned up sufficient clods to hold the field for a few more hard winds. The south field is holding in good shape without the use of the lister.

The small grain crop prospect is about gone. The whole of these is looking so sick that it is doubtful if a rain now would help much except on fallow plots. These are holding out wonderfully well but will not make a very heavy yield now under the most favorable conditions. The main problem now is not the preparation of plots for planting but in keeping the station from blowing.

The third date of cotton was planted today. This was planted on land plowed during January. Beside the regular 3 variety date planting the first of the single row date variety planting was made. This included 29 varieties with 4 checks. The other two dates of cotton have not started to germinate.

Dalhart, continued:

The grain and forage sorghum varieties planted on May 15 have not germinated yet. The dates will be planted on time if weather conditions will permit but the D. L. A. plantings will be delayed until more favorable conditions prevail. We have plenty of time yet to get the planting done without trying to plant in a dry seed bed which consists mostly of clods.

Considerable watering was done this week on trees, grapes, etc., planted this spring. It is surely going to be a big job to save them with so much dry, hot wind prevailing. We have had plenty of wind to pump water so the water problem has not been a handicap.

About 26 rabbits were killed one night this week, using car lights to locate them on the plots.
Maximum temperature 100, minimum 46.

TUCUMCARI:

The record-breaking drought has continued unabated the past week, and unusually high temperatures, combined with occasional sand-moving winds have been very severe on all vegetation. Trees are yellow, with many leaves gone or parched, and new grass growth is practically negligible. The calf crop is unusually heavy, but cows are still being fed cake and are very poor. Heavy rains will be required if calves are to make normal growth.

Field work is impossible, for a lister or sulky plow cannot be held in the ground. Weed growth has been very light and has not been a factor in preventing soil movement. Wheat can be considered a failure, although portions of a few fields might be harvested if rains come soon.

Station work has consisted of watering trees in an attempt to save them, and in other work which will facilitate uninterrupted field work if rains arrive.

About the only possible climatological records left to break are those of low temperature and heavy precipitation. The highest wind movement ever recorded in this vicinity occurred on May 8; the hottest May day, 100 degrees, occurred on the 17th; the mean temperature for the past week has been 80 degrees, and May to date has been warmer than any May on record. Evaporation for the first 20 days in May totals 8.863 inches, while the total for the past week was 3.401 inches.

Tucumcari, continued:

Some striking, but discouraging, precipitation records are given below:-

	Jan.	Feb.	Mar.	Apr.	May	Total 4-2/3 months
1905-1926 Ave.	0.35	0.51	0.77	1.76	2.26	4.90 inches
1927	0.02	0.24	0.22	0.03	0.00 to May 21	

	Jan.1 to May 21	Oct. 1 to May 21
1905-1926 Ave.	4.90	7.84
1927	0.51	2.34
Deficiency for period	4.39"	5,50"

Maximum temperature 100, minimum 52; Average hourly wind velocity, 7,4 miles.

BIG SPRING:

During the first part of the week weather conditions could be characterized as very hot and dry. During this time the temperature ranged from 100 to 107; the hot winds were more like those of August than of May. On the night of May 20 the dry spell was partially broken by a rain totaling .91 inch; this was the first moisture of any consequence since the first part of April. Although this rain relieved things considerably, it came down so fast and hard that there was considerable runoff. This moistened the ground sufficiently so that the planters can be started next week.

The winter wheat plots practically burned up this year. They were harvested during the past week, and most of them could be classed as total failures. The straw was so short that it was necessary to mow them, and the margins of the plots was the only part that developed any grain. Other work consisted of harrowing, watering trees, and cleaning up the station grounds.

Maximum temperature 107, minimum 54; precipitation .91 inch.

LAWTON:

A week of very windy, dry weather with a maximum temperature of 94 continued to hold the production of small grain at a disadvantage. Wheat heads are short and oats heads which are now turning are very light and poorly filled.

Winter barley varieties and the October 20 date of Wisconsin No. 519 were harvested during the week.

Lawton, continued:

A light crop of alfalfa consisting of a little over six tons was cut and placed in the barn. Spring planting of all crops was completed and fairly good stands are in sight except cowpeas which seem unable to break through the surface crust. Thinning of the April 15 planting of grain sorghums was begun on the 21st. Corn in the M. C. plots was also thinned.

Local dealers disposed of three or four combines the past week and farmers are rapidly making preparations for small grain harvest either with binders or combines.

WOODWARD:

A small shower was received the fore part of the week, which somewhat relieved the condition of winter wheat, but on the 20th a high wind raged all day, which did far more damage than the shower did good. Many fields of wheat about the country are practically gone, while others are still standing drought in good shape and will put through if rains come soon. Wheat was making so good a showing a month ago, and there is so large an acreage in, that its present condition is a bitter disappointment.

Practically the entire week has been spent full force with teams in plowing, listing, and leveling land previously listed, and almost the entire station is in prime condition to plant to row crops as soon as good rains come.

Maximum temperature 100, minimum 46; precipitation .36 inch. Evaporation, 1.585 inches. Average hourly wind velocity, 9.4 miles.

NOTE:- For Field Men, Office of Dry Land Agriculture.

When preparing specifications for bids, attention of field men is invited to extract from memorandum of this office under date of July 16, 1925, reading, as follows:

> "All specifications must specify accurately, and describe impartially, the article required, and, in no case, call for the article by the manufacturer's name, unless the words "or equal" are added. Such details as might exclude a bidder having comparable equipment should be left out of specifications. Uniform specifications must be sent to all asked to bid."

This quotation is in line with the decision of the Comptroller General and must be observed in all cases.

UNITED STATES DEPARTMENT OF AGRICULTURE
Office of the Secretary
Washington

COPY

MEMORANDUM NO. 570

Saturday Afternoon in the Summer

Executive Order No. 4644 of May 9, 1927 is as follows:

It is hereby ordered that from the first Saturday of June to the last Saturday of September, both inclusive, of each year until further notice, four hours, exclusive of time for luncheon, shall constitute a day's work on Saturdays for all clerks and other employes of the Federal Government, wherever employed; and all Executive or other orders in conflict herewith, except the Executive Order of April 4, 1908, relating to certain naval stations, are hereby revoked.

Provided, however, that this Order shall not apply to any bureau or office of the Government, or to any of the clerks or other employes thereof, that may for special public reasons be excepted therefrom by the head of the Department or establishment having supervision or control of such bureau or office, or where the same would be inconsistent with the provisions of existing law.

As a consequence of the above, par. 494 of the Administrative Regulations of the Department is amended to read as follows:

494. SATURDAY AFTERNOONS IN SUMMER.- Beginning with first Saturday in June, all Saturdays to and including the last Saturday in September will be charged as four hours in annual leave and as a whole day in sick leave and leave without pay.

(Sgd.) R. W. Dunlap

Acting Secretary.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 28 1927

REPORT FOR WEEK ENDING MAY 28, 1927.

HAVRE:

With 2.55 inches of rain recorded on five days during the past week, the total for this month is nearing the record. At the station, we have had 5.62 inches since the first of this month. In Havre, the total since the first of the month has been 6.07 inches. The greatest amount of rainfall recorded for the month of May up until this year has been 5.68 inches.

Wheat, both spring and winter, winter rye, and domestic grasses are making very good growth. The temperatures have been a little too low for oats, barley and alfalfa. There has been considerable more loss of stand this spring from crusting soil than has ever been experienced. Stands of oats and barley in some cases were probably reduced by hail which fell just after it had emerged. Some of this, however, emerged during the few warm days the second week in May and the leaves were doubled under the crust. Very few plants of this kind seemed to get through even though the crust has been wet for over a week. There are a few fields in this section that will have to be reseeded.

Soil moisture samplings during the week show that the top three feet are very wet. Fallow has at least a foot more moisture than continuous cropping. The driest plot is fall plowing subsoiled.

Ten acres of corn are planted in one of the bottom fields on the station. This is the only corn planted. A part of this was planted on the 16th and the remainder on the 26th. This is sandy soil and the only field that could be planted.

It is certain now that the acreage of wheat and corn will both be decreased in this section. Later seedings will be feed-grains and some flax.

Milk River and its tributaries rose rapidly the first part of the week with the result that a lot of land, including beet fields, in the Milk River Valley were flooded. The rain of 1.17 inches yesterday afternoon and last night will probably result in another flooded condition.

Maximum temperature 65, minimum 37; precipitation, 2.55 inches.

JUDITH BASIN;

The weather during the past week has been exceptionally stormy with precipitation recorded each day except one. Snow fell, at times, during the first two days but continued as drizzling rain. Precipitation has been recorded on eighteen of the twenty-eight days to date and is nearly one and one-half inches above the average for May.

The storm has been very favorable to spring sown crops. All crops seeded on the various projects have emerged with good stands. Seeding of potatoes and corn has been delayed.

Approximately 75% of the wheat, in the Judith Basin, is seeded. Farmers who have been delayed in seeding their entire acreage count on higher yields from early plantings. Weeds will undoubtedly be controlled in better shape on fields seeded late.

The remainder of the blocks in the pasture experiments are being fenced. Potatoes have been sorted in preparation for planting. Trees in the orchard were pruned and weeds cleared from the shelterbelt. Repairs on buildings and machinery were made.

Maximum temperature 64, minimum 31; precipitation, 2.57 inches.

HUNTLEY:

A heavy shower early in the week followed by almost daily sprinkles and attendant cloudy skies served to keep teams out of the fields. In fact, no field work has been possible since May 19, because of the wet ground. Severe hail storms visitied this section of the state on the 26th and 27th and, although no damage was done to crops on the station fields, outlying districts have reported serious injury to young sugar beets, corn, and late-sown small grain that was just coming up. A total of 4.10 inches of precipitation has been received at the station this month. This is the heaviest May precipitation ever recorded here.

Temperatures during the past week have been too low to encourage much growth of crops and with the exception of winter rye little change has been noted over the crop condition of a week ago. Winter rye is beginning to head.

Hogs in the pasture experiments were weighed and all showed satisfactory gains in spite of the adverse weather and the wet lots with which they have had to contend.

Maximum temperature 72, minimum 38; precipitation, 1.59 inches.

SHERIDAN:

Continued rain delayed field work the first of the week. Preparation of ground in the rotation field finally was completed early in the week and the corn was planted the 26th. Planting of corn varieties was started today, May 28, but was stopped by rain.

Weather has continued cool and cloudy the most of the time. Growth of small grain continues slow while grass and alfalfa is making a fast growth. Rows of all perennial crops were cultivated during the week.

Total precipitation for May to date is 4.33 inches, the heaviest precipitation for May yet recorded here. The total since January is 50% above the average and also is the highest yet recorded here. All field work has been delayed and much seeding yet remains to be done.
Maximum temperature 72, minimum 36; precipitation, 1.49 inches.

DICKINSON:

Cool, windy and mostly cloudy weather continued through the week with only a few light showers.

Growth of crops was slow, due to lack of sunshine. Grass is greening up well but grains seemed to make little top growth.

As alfalfa comes farther along it is evident that the stand is very thin in places and will have to be reseeded. The killing out was probably a result of the dry season last year more than to any other factor. Where more water was available in the soil there was less killing. Where Grimm alfalfa and crested wheat grass were seeded on adjacent plots on the sandy soil of the west side of the station the alfalfa was about 95 per cent killed and the wheat grass came through without loss. Sweet clover, like alfalfa, was affected by the dry weather and stands are thin in several places. No killing is found in the nursery except in some less hardy members.

Corn was planted on the rotations May 24, just two weeks behind schedule as a result of the wet weather. Increase blocks were planted and the silage field was planted to Northwestern Dent.

Flax and millet were planted on the rotations on the 26th and Cobbler potatoes on May 28.

Dickinson, continued:

A rain began on the night of the 28th, and to noon of the 29th .70 inch was recorded. This brings the May precipitation to 5.27 inches.

Messrs. Stewart Lockwood and R. L. Shotwell, of the Bureau of Entomology, were station visitors May 25.
Maximum temperature 72, minimum 37; precipitation, .26 inch.

MANDAN:

Agronomy

Field work was somewhat delayed early in the week, owing to the rains of last week and early this week.

The corn breeding block was planted during the week, and land was prepared for sorghums and millets.

Crested wheat grass was seeded in some small blocks, and in a few roadways that are subject to blowing.

Alfalfa was seeded in one of the feed fields, where some winter-killing took place.

Roadways have been lined up and marked, and the plots are being trimmed today.

The rainfall early in the week brought the total for May to over 6.25 inches, which is a half inch higher than the all time record for this section. The Weather Bureau at Bismarck reports over an inch higher for May than has been registered since records started in 1875.
Maximum temperature 73, minimum 38; precipitation, .77 inch.

Cooperative Grazing Experiment

The cattle show considerable improvement as the pastures are now in very good condition for grazing. Brome grass especially is furnishing excellent grazing.

Arboriculture

The week has been spent in cleaning up dead trees and trash from the tree plantings. A surprising amount of dead brush has been cleared out of these plantings, consisting mostly of willow and poplar, which killed out badly during the unusually dry season of 1926.

Mandan, continued:

County Agents have been active in sending in applications for Cooperative Shelterbelt Demonstrations to be planted in 1928. New applications received to date are as follows: Montana, 75, North Dakota, 69, South Dakota, 57, Wyoming, 18, making a total of 219. With 93 applications postponed from last year, several of which have since been canceled, there are now about 300 on file for inspection this summer.

The ash planted last spring made a very poor start at that time, but is now coming up in an excellent stand. This year's planting of Caragana, Russian olive and Boxelder are coming up very nicely, so that prospects for trees next fall are excellent.

Horticulture

Plums are now nearly through blooming, while apples and crabs and plum-sandcherry hybrids are in full bloom. The weather during the past week was not favorable for the work of bees and other insects among the blossoms, and it is feared there may be a light set of fruits requiring cross pollination. A considerable amount of outdoor crossing has been done with plums, apples, currants, gooseberries, and Juneberries.

Material in the nursery and seedbeds is doing nicely after the rains. Good stands have been obtained from last year's budding work. Currant, gooseberry and grape cuttings are doing much better than usual. Softwood cuttings of gooseberries and other plants will be made next week.

All vegetable planting has been completed during the week. The tomato plants in the Breeding project, comprising 90 selections with a total number of 4,500 plants, were set out on the 26th and 27th. Celery, late cabbage, and cauliflower were set out, and the final seedings in the Acre garden, with miscellaneous greenhouse work, comprised the remaining work in the vegetable section of the Horticultural department.

The lilacs are beginning to bloom. The earliest Syringa amurensis was out on the 23rd, with the common purple and a few of the French hybrids following closely. The Persian lilac, one of the showiest shrubs on the station grounds, will be in bloom within the next week.

Mr. H. P. Gould, Fruit Production Investigations, Horticulture, and Dean Walster, North Dakota Agricultural College, visited the station during the week. Students in the Agricultural Class and the Biology Class, of the New Salem High School, each spent an afternoon studying phases of the station work of interest in their studies.

BELLE FOURCHE:

The weather has been more or less unsettled and a light shower was received every day. The precipitation, however, was not sufficient to interfere seriously with field work, and seeding of all small grains and hay crops on the dry land rotations has been completed with the exception of the reseeding of a few sweet clover and winter wheat plots.

Maximum temperature 81, minimum 42; precipitation, .18 inch.

ARDMORE:

Weather conditions were favorable for field work during the entire week. Planting corn was completed on May 25. The flax, alfalfa, and sweet clover were also seeded during the week. Planting these crops was delayed for the purpose of weed control.

Field work during the latter part of the week consisted of trimming plots and disking roads, duckfooting the fields where sorgo is to be planted, and plowing the fallow plots in the rotations.

Some of the early planted corn emerged during the latter part of the week. Grains are beginning to tiller freely and all grains are looking well. Winter rye is now nearly a foot tall.

The results of the wintering experiments with beef cattle were computed. The average gain per head of the steers in the different lots was, as follows:

Lot	Feed per head	Total gain during 168 days winter period
I	10 lbs. oats straw, 5 lbs. alfalfa	86 pounds
II	15 lbs. alfalfa	89 "
III	25 lbs. corn silage, 5 lbs. alfalfa	188.3 "
IV	15 lbs. wheat grass	86.7 "

The results of this year's feeding test confirms the conclusion that the amount of silage fed is higher than necessary for a maintenance ration.

The weather during the week has been threatening but not stormy. Temperatures have been moderate.

Maximum temperature 80, minimum 40; precipitation, .01 inch.

ARCHER:

The weather on the whole has been favorable for field work. On May 23 the wind was so severe that soil blowing occurred to some extent. Aside from this the weather has been pleasant to cool. A shower with some hail occurred during the afternoon of May 22.

The seeding of millet in the east dairy field was continued until this morning when the drill was used to seed millet, flax and peas on the Dry-Land plots. The planting of potatoes on the Dry-Land plots was finished Monday. The corn and bean seeding on these plots was completed Friday. Thirty-four acres of corn were seeded on the dairy field with the furrow drill instead of the corn planter. Due to the lateness of the season this was deemed necessary. Today, May 28, the lister is being used to seed some of the corn in the dairy field. The varieties of wheat, oats and barley have emerged and good stands secured.

The plums are in full bloom but the blossoms are not as abundant as last year. The severe September frost seems to have damaged a number of trees. The top parts of the Opata plum trees were killed, while the Sapa trees were not injured. These are the only varieties of plums which have produced mature fruit at this station. The first apple blossoms appeared this year. They were scattering and were produced on four different trees. During the winter a large portion of the cottonwoods died back.

In the report for weeking ending May 14, in the first line, the date of the storm should be May 8 and 9, instead of May 1 and 2.
Maximum temperature 76, minimum 36; precipitation, .20 inch.

AKRON:

Another favorable week for field work has passed by. The sorghums in the general forage variety experiment and on the rate and spacing corn land were seeded early in the week. The corn variety experiment was also seeded early in the week. The seeding of the sorghum nursery followed the seeding of the varieties in the general variety experiment. Forestry experiment 2 along the north side of the farm was cultivated and then cross cultivated to eliminate weeds that had gotten well established.

Some time was spent on the fencing of the seeded perennial and biennial grass and legume pastures across the railroad. A part of the rotation plots were trimmed and the roads cultivated. Lot No. 2 ewes on the rye pasture of Sheep Rotation 51 were weighed today, May 28.

Akron, continued:

Winter rye is in full head. Early fall sown winter wheat on fallow is attempting to joint and is burning badly. The burning damage dates from the heavy frost the first of the month which the wheat has been unable to overcome because of the shortage of moisture. Later sown wheat on fallow and wheat sown on other preparations, not so forward, did not freeze so severely and is withstanding the shortage of moisture well. Spring sown grains, while small, are net weedy and are withstanding the shortage of moisture well. Corn seeded soon after the 15th is emerging unevenly.

The only precipitation thus far in May is the approximate half an inch received during the freeze and storm the 8th to 10th. The normal precipitation for May is approximately 2.5 inches. Most winter wheat the country over is holding well.

Professor Morton and Mr. E. J. Maynard were here Thursday afternoon and Friday morning in the interest of the Sheep Rotation bulletin. Mr. William Everson demonstrated his furrow drill near Otis on last Tuesday afternoon to a goodly number of farmers and business men.
Maximum temperature 90, minimum 37; precipitation, 0.

NORTH PLATTE:

Very high winds have again prevailed. With no rain from the 8th to 26th, available moisture under winter wheat where the stands were complete and growth heavy has been completely exhausted and the plants severely damaged. Much of this will not recover. The condition is the worst on fallow and early plowing. On corn stubble where stands are thin, conditions are much better.

After much threatening and bluster, .50 inch of rain was received on the 26th. This will revive spring grains and other late crops but will be of little benefit to winter wheat. Heavier rains were received in many places in the state. Crop conditions both east and west are better than in this locality.

GARDEN CITY:

Continued drying weather has prevailed during the past week. It cannot be said that much damage was done as most everything was gone before the hot winds of the past week came. A little winter wheat on fallow shows some green, but most wheat fields are burned brown. The spring small grains are also about done for. Sorghum planted on the 16th have not emerged except for a few scattering plants.

Garden City, continued:

Planting of row crops will necessarily be postponed for a while in hope that moisture may be received. Most of the area going to such crops on the project was spring tooth harrowed yesterday. The seedbed is dry and very cloddy. There may be enough moisture to cause lister planted crops to emerge. Most of the ground plowed either last fall or early this spring has dried out as deep as it was worked. An inch of rain would make it possible to procure a fairly good seedbed, but unless it is received there seems little advantage to planting.

A part of the first cutting of alfalfa was harvested during the week. Much of the hay in the valley is being put up now. The first crop, generally speaking, is lighter than usual and also much earlier. Farmers under the ditch have had practically no water this spring. The sugar company's large reservoir at Lakin is also very low. That company has repaired most of their deep well pumps and are planning on operating them this summer.

Maximum temperature 101, minimum 50; precipitation 0.

COLBY:

The thin wheat, of which there is a large acreage, gives greater promise of a crop right now than it has at any time this season. One reason for this is that the thicker and earlier wheat has completely dried and burned in spots until recovery is out of the question. The thin wheat in most cases is relatively free from weeds. The high winds have kept the weeds out on the barer fields. There could not be a large yield of wheat even under favorable conditions. Winter wheat on the project has held its own this past week and in some cases gives promise of making a crop. On most of the plots the stand is so thin that very little wheat can be harvested.

The high wind of the 21st and 22nd did as much damage in the immediate vicinity as any winds so far this spring. A field of commercial wheat on the station which has been punished quite severely at various times during the spring was whipped and blown on the 22nd so that it may be necessary to list this field into feed crops.

Corn has shown a good stand but very little growth has resulted. Some even report that the winds have been damaging the listed corn. Some of the listed fields either catch sufficient blowing soil to cover up some of the corn or the soil sifting down from the ridges whips the tender plants. Cut worms are damaging the stands in many fields. Corn on the project will not be thinned before the coming week.

Colby, continued:

Planting of sorghums has not begun as yet. With favorable weather conditions it is planned to start planting the sorghums sometime during the coming week.

Maximum temperature 98, minimum 44; precipitation, 0.
Evaporation, 2.581 inches.

DALHART:

Two days of nice weather prevailed during the past week. There was very little wind on these two days but they were rather warm. The remainder of the week has been quite windy and dusty, with no signs of rain to relieve the existing condition.

No further planting was done during the week. The seed of the varieties, which are already planted, remains in a dry seed bed undisturbed. About the only thing remaining green around here is the leaves on trees and these have been thinned out by winds until the trees look like chickens in the molt. We have had no further soil blowing since listing the north field.

Work this week consisted of putting in new telephone poles from the station to the railroad right-of-way. These new poles are drive pipes formerly used by the Ice & Electric Company in their deep well. The walls are 1/2 inch thick, outside diameter 2-1/2 inches, the length ranging from 18 to 20 feet. These poles cost 50¢ each, which makes a very cheap post of permanent value. The insulators were bolted to the pipe. Water had to be used to dig each hole to a depth of 5 feet. Well casing, (4") was used to replace the old patched electric light poles we had on the station. This also was a very cheap replacement, costing the same as the above.

The grapes have recovered wonderfully from the damaging wind storm we had a few weeks ago. New shoots came out and are well filled with bloom. The new varieties, which were planted this spring, are having a hard pull in spite of frequent watering.

Maximum temperature 99, with hot winds prevailing nearly all week; minimum 46. Ranges are dry and cattle are suffering.

TUCUMCARI:

Climatic conditions have not changed during the past week, and as a result of the drought and high temperatures cattle are a little weaker, fields are blowing a little more, trees and shrubs appear more wind-swept and bare, and more May climatic records have been broken.

Tucumcari, continued:

Field work has been impossible for several weeks and no farm implement which can penetrate the crust in fields has been found, so but little protection from blowing has been secured. When a sharp lister rides the crust, causing first one when and then the other to leave the ground, no much can be done in the way of preventing soil movement.

Repairing fences, painting hay racks and buildings, watering trees, and other jobs of like nature have been performed.

This month had the highest temperature ever recorded in May; highest wind velocity for 24 hours ever recorded; mean temperature to date is 6 degrees above the long time average, following an April which was 5 degrees above the long time April average; and evaporation to date this month has totaled 12.695 inches, the third highest ever recorded. This will be the first month on record at this station with an evaporation exceeding 14 inches. There has been no precipitation this month, while only .03 inch was recorded in April. Precipitation since January 1 is .51 inch, while that since October 1 totals 2.34 inches.

Maximum temperature 98, minimum 52; precipitation, 0.

Evaporation, 3.832 inches. Average hourly wind velocity, 8.4 miles.

BIG SPRING:

Weather conditions during the past week have been favorable for field work although the hot winds which have prevailed have dried the soil out to a great extent. The maximum temperature has been above 100 on several days during the week with 107 as the high point.

As the rain of last week only covered a very small section of the county, crop prospects are anything but bright for a large per cent of the farmers of this section of the country. Unless it rains within the next week or ten days, it will be too late for cotton.

All hands and teams have been kept busy in the field during the past week. With the exception of millet and feterita, all plots in the D.L.A. project were planted. The cotton varieties and spacing block of cotton in the cooperative field was also planted. If these hot winds continue, it is rather doubtful as to whether these plantings will emerge or not before the soil drys out.

Maximum temperature 107, minimum 60; precipitation, 0.

LAWTON:

Maturity of small grains has progressed rapidly the past week. Oats seeded early in February will be ready to harvest May 30, while later seedings will be harvested within a very few days. Wheat is turning and a decidedly yellow-brown color is already present.

A rain of 1.36 inches accompanied by a very high wind and some hail fell on the 23rd. Falling in torrents, as it did, the per cent of runoff was very high and soil erosion necessitated replanting of some row crops. This rain was, however, highly beneficial to wheat and oats. Without it the grain would have filled very poorly.

During the late evening of the 19th a severe wind storm caused more soil blowing than at any other time during the spring. Fortunately, a large part of all row crops had been harrowed and were not injured, except the May 15 planting of grain sorghums. Although the small plants in this project were severely injured, present indications are for recovery.

The Comanche Company, 4H Club Boys and Girls held their annual picnic on the station May 28. About 100 were present.

A maximum temperature of 98 degrees was recorded the last two days of the week. Minimum temperatures ranged from 55 to 74.

WOODWARD:

Rainfall which has contributed to the present winter wheat crop is as follows:

September 3.37", October, 6.09", November 1.09", December, 1.34", January, .41", February, .68", March, 1.22", April, 2.20", May, .51".

Heavy fall rains put water deep in the soil. Moderate winter and spring rains and snows kept it growing nicely and without excessive growth. Rust attacked leaves later and this with drought killed them as well as many lesser stems leaving stands thin. Moisture deep in soil, therefore, had nothing to support during the almost unbroken drought of May, except short stemmed heads. These have filled out remarkably well and are now in dough.

Woodward, continued:

Excessively hot winds may shrivel kernels at the last moment, or a rain may "cook" and kill plants prematurely. At the present writing, however, it seems that wheat over the country may yield seven to ten bushels and farmers are in an easier frame of mind than for some weeks. Merchants, who stocked up heavily in anticipation of a big wheat crop, are not as near apoplexy as they were a week ago. Of course, some fields are gone but others are much better than anticipated. Wheat planted late on sorghum stubble had less moisture to start with and is caught by the dry weather at more critical stage.

Work for the week has consisted of spraying vineyard for root worm, cutting sweet clover on dairy project, leveling fields listed earlier in season, and digging Johnson grass roots. Regular farm work, except the harvest of wheat and rye, will now be at practically a standstill until rains come, when the entire sorghum crop of about two hundred acres will be planted as rapidly as possible.

Maximum temperature 98, minimum 57; precipitation, 0.

Evaporation, 2.581 inches. Average hourly wind velocity, 9.2 miles.